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Before the
FEDERAL COMMUNICATIONS COMMISSION
Washington, D.C. 20554

Federal Communications Commission
Office of the Secretary

In the Matter of the Petition of
NORRIS SATELLITE
COMMUNICATIONS, INC.

RM No. 7511

For Amendment of Parts 2 and 25
of the Commission's Rules to
Establish a General Satellite
Service in the Ka-Band

In the Matter of the
Applications of

NORRIS SATELLITE
COMMUNICATIONS, INC.

File Nos. 54-DSS-P/L-90
55-DSS-P-90

For Authority to Construct,
Launch and Operate Communications
Satellites in the Ka-Band

**REPLY COMMENTS OF
MOTOROLA SATELLITE COMMUNICATIONS, INC.**

Motorola Satellite Communications, Inc. ("Motorola"), by its attorneys, hereby submits these reply comments to the comments and petitions filed in response to the above-captioned matters.^{1/} In its applications and petition for rulemaking, Norris Satellite Communications, Inc. ("Norris") requests authority to construct, launch and operate a domestic communications satellite system in the Ka-band for the provision

^{1/} These proceedings were consolidated for purposes of submitting pleadings by Order, DA 90-1591, released November 8, 1990. By Order, DA 90-1789, released December 13, 1990, the staff extended the time for filing such replies until January 7, 1991. Because of inclement weather, the Commission extended all filings due yesterday until today.

of so-called General Satellite Service. This new service designation would require the reallocation of the domestic and international frequency tables in order to permit fixed, mobile and broadcast satellite services in the 19.7-20.2 GHz and 29.5-30.0 GHz bands. These frequency bands currently are restricted to the provision of fixed satellite service on a primary basis and mobile satellite service on a secondary basis. See 47 C.F.R. § 2.106.

On December 3, 1990, Motorola submitted an application to the Commission for its IRIDIUM mobile satellite system, a global digital network comprised of 77 interconnected low earth orbit satellites, earth station gateways and portable/mobile transceivers with low profile antennas. IRIDIUM will offer the full range of mobile services, including radiodetermination, paging, messaging, voice, facsimile and data services. Motorola's frequency plan envisions the need for up to 100 MHz in the L-band for mobile communications links, 200 MHz in the Ka-band for intersatellite links, and most importantly for purposes of these proceedings, 100 MHz in the 27.5-30.0 GHz uplink band and 100 MHz in the 18.8-20.2 GHz downlink band for gateway and satellite control ("TT&C") facility feeder links. These proposed feeder links are fully consistent with the existing domestic and international table of allocations.

Motorola is in general agreement with the comments filed by Geostar Messaging Corporation ("GMC"). As an applicant proposing to use the Ka-band for its IRIDIUM system, Motorola has a vital interest in the technical and interference criteria, as


well as the licensing procedures, that the Commission will be considering in these proceedings. The combination of high-powered broadcast satellite services with fixed and mobile service applications raises serious questions as to the future availability of spectrum in this band for currently authorized transmissions such as fixed satellite feeder links. Norris simply cannot rely upon the current lack of utilization of the Ka-band as a basis for justifying its proposed new service. While the NASA ACTS satellite may be near the end of its useful life by the time Norris proposes the launch of its satellite system, Motorola's IRIDIUM satellite system will just be getting off the ground.

Motorola further agrees with GMC and GTE Spacenet Corporation that Norris' application does not provide any basis for concluding that its proposed satellite system can coexist with conforming fixed satellite usage in the Ka-band, such as the IRIDIUM feeder links. Indeed, there is no interference study in the application from which to determine whether any other satellite system could operate in the requested portion of the Ka-band along with Norris' proposed satellite system. At minimum, the Commission must analyze the potential impact of the proposed Norris system on future planned usage by other users of this bandwidth. Otherwise, the Commission runs the risk of approving a potentially inefficient satellite design merely because it was the first such system proposed in the Ka-band at the expense of more efficient systems.

For the foregoing reasons, Motorola respectfully requests that the Commission consider the Ka-band frequency spectrum requirements of its IRIDIUM system application in conjunction with the processing of the above-captioned Norris application and with the related petition for rulemaking.

Respectfully submitted,

MOTOROLA SATELLITE
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January 8, 1991

CERTIFICATE OF SERVICE

I, Philip L. Malet, hereby certify that on this 8th day of January, 1991, I caused copies of the foregoing Comments to be served by first class mail, postage prepaid, to the following persons:

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